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ABSTRACT

Little information is available concerning the validity of the Admission Test for Graduate Study in Business as a predictor of grades in graduate business programs, despite its use for 15 years. The overall pattern of data suggests that the ATGSB is not a strong predictor of graduate business GPA. Four of the 8 studies reviewed showed low zero-order correlations between ATGSB and graduate grades; 2 showed low moderate multiple correlations when ATGSB was combined with undergraduate GPA as a predictor; 1 reported no significant relationships; and 1 reported high ATGSB Q and V scores were more often associated with high graduate grades than with low ones, but that students with middle range ATGSB V scores received even higher graduate grades than did students with high ATGSB scores. (JS)

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ABSTRACTS AND REVIEWS OF RESEARCH IN HIGHER EDUCATION NO. 14

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Predicting Graduate Business Grades with the Admission Test
for Graduate Study in Business

Murray Melnick, Ph.D.

The Admission Test for Graduate Study in Business (ATGSB) has achieved wide popularity. An Educational Testing Services (ETS) report (1970) records mean values from 724 colleges and universities. But despite its apparent acceptability over a period which now spans more than 15 years, there are few reports of the test's validity; in fact no review of the test appears in Buross' Mental Measurements Yearbook (Sixth Edition, 1965).

In attempting to assess the value of the instrument, investigators have presented three kinds of statistics, simple (zero-order) correlations between ATGSB and graduate business grades, multiple correlations in which ATGSB is only a part of the predictive input, and tests of significance (t tests or F tests) comparing differences in graduate performance among students with different levels of ATGSB score.

Do the few existing studies establish the predictive value of the instrument? Boldt (1969) of ETS thinks so:

Validity studies have proved the worth of undergraduate record (UGR) and the Admission Test for Graduate Study in Business (ATGSB) as predictors of success in graduate school--as measured by first-year average grades (p.5).

However, no data were presented to support the validity claim.

Zero-order Correlations

Pitcher, Deemer & Smith (1968) reported ATGSB correlations based on a large sample of 4,723 students at 26 graduate schools of business. Overall, ATGSB correlated .23, ATGSB Verbal .16 and ATGSB Quantitative .25 with first-year average grades in graduate business school.

The weak predictive power of the ATGSB was also indicated in a series of reports on the Hofstra MBA program (Melnick & Schubert, 1969; Schubert, 1970; and Melnick, 1971) where low insignificant correlations were reported between ATGSB total scores and grades in graduate core courses (r's ranging from .02 to .20, total N=140).

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Multiple Correlations

In 1969, ETS published data on multiple correlations based on Pitcher, Deemer & Smith's sample, mentioned above. In two sub-samples, multiple R's of .30 and .39 were reported between jointly considered ATGSB and undergraduate GPA, versus graduate grades.

Lewis (1964) examined the relationship of selected background variables to achievement measures in the Master's degree program in Business Administration at the State University of Iowa. The achievement criterion was the GPA in required courses in the MBA program. A persistence criterion was also used; students were divided according to whether they were still in the program or had graduated, had dropped out before completing 15 semester hours, or had dropped out after completing at least 15 semester hours.

With data on 67 students admitted to the program during the 1960-61 academic years, a stepwise multiple regression procedure was used to relate the number of undergraduate hours, undergraduate GPA, ATGSB verbal and ATGSB quantitative scores to GPA in required courses. Taken together, GPA in under-graduate business courses and ATGSB quantitative scores were significantly associated (Multiple R of .46) with GPA in required MBA courses. This was the only significant finding. The persistence factors, type of undergraduate college and type of undergraduate major (evaluated by analysis of variance), number of undergraduate semester hours in business, ATGSB verbal scores and cumulative undergraduate GPA were all statistically insignificant predictors.

Tests of Significance

Waters (1968) studying a sample of 104 adult part-time graduate students at George Washington University, found no significant differences in graduate business grades among students scoring high or low on the ATGSB. Nor was graduate GPA predicted by differences in undergraduate GPA or the length of time since receiving the BA degree.

Pieper (1969) used a sample of 432 MBA matriculants at the University of California. He concluded that students who had received low ATGSB scores on either the Q or V scales were almost as likely to receive the MBA as students who received high scores; in fact there appeared to be an inverse relationship between total ATGSB score and degree completion. Taking the graduate GPA as the criterion of success, no significant differences in graduate grades appeared in a comparison between students with high and low ATGSB scores. Only when consideration was limited to those who had received the MBA (75% of the sample), did significant differences in graduate GPA arise in connection with high and low levels of ATGSB score. Students who received high Q or V scores (35 and up), or high total scores (550 or higher) seemed more likely to obtain a graduate GPA over 3.49 than students who received Q or V scores

under 30. Similarly, in terms of total score, students who received a total ATGSB score of 550 or higher seemed more likely to complete their graduate business courses with a GPA of over 3.49 than students who received low ATGSB scores (under 500).

Pieper failed to stress, however, that the middle range of ATGSB scores (30-34) occupies an ambiguous position. Although students with middle range Q scores received GPA's intermediate between those obtained by students with high and low ATGSB's, students with middle range V scores more often received higher GPA's than students who had low or high ATGSB V scores.

Summary

Not much information is available concerning the validity of the ATGSB as a predictor of grades in graduate business programs. The overall pattern of existing data suggests that the ATGSB is not a strong predictor of graduate business GPA. Of the eight studies reviewed, four showed low zero-order correlations between ATGSB and graduate grades (.02 to .25); two showed low moderate multiple correlations (.30 to .46) when ATGSB was combined with undergraduate GPA as a predictor, one reported no significant relationships; and one reported that high ATGSB Q and V scores were more often associated with high graduate grades than low ones, but students with middle range ATGSB V scores received even higher graduate grades than students with high ATGSB scores.

ATGSB is thus seen at present as a weak single predictor. Although a multiple correlation of .46 approaches respectability, it accounts for only about 20% of the variance. Further, it would be preferable that an instrument's validity could be demonstrated in and of itself, apart from immersion in multiple correlations to which it may contribute a small but still unimpressive increment.

References

- Holdt, Robert F. Discrepant predictor study, (Brief Number 2). Princeton, N. J.: Educational Testing Service, 1969.
- Buros, Oscar Krisen, (Ed), The sixth mental measurements yearbook. Highland Park, N. J.: The Gryphon Press, 1965.
- Educational Testing Service, Moderator variable study, (Brief Number 3). Princeton, N. J. : Educational Testing Service, 1969.
- Educational Testing Service (ATGSB Research & Development Committee) ATGSB Statistical summary by undergraduate colleges attended, 1957-1970. Princeton, N. J. : Educational Testing Service, 1970.
- Lewis, John W. The relationship of selected variables to achievement and persistence in a master's program in business administration. Educational & Psychological Measurement, 1964, 24, 951-954.
- Melnick, Murray. Brief Report No. 25. Hempstead, N. Y.: Center for Study of Higher Education, Hofstra University, 1971.
- Melnick, Murray & Schubert, Alida. The relation between scores on the Admission Test for Graduate Study in Business (ATGSB), undergraduate GPA, and grade in graduate core courses in the M.B.A. business program at Hofstra University. Hempstead, N. Y. : Center for the Study of Higher Education, Hofstra University, 1969.
- Schubert, Alida. Brief Report No. 22. Hempstead, N. Y.: Center for the Study of Higher Education, Hofstra University, 1970.
- Pieper, W. C., Jr. An analysis of applicants admitted to the master's program of the Graduate School of Business Administration at Berkeley. Berkeley: Office of Institutional Research, University of California, 1969.
- Pitcher, Barbara; Deemer, Alice B.; & Smith, Herman F. An exploratory study of four variables as moderators of the effectiveness of the Admission Test for Graduate Study in Business and undergraduate record for predicting business school grades. Princeton, N. J.: Educational Testing Service, 1968.
- Waters, Elberry., Jr. The Admission Test for Graduate Study in Business and the adult part-time student. Washington, D.C.: George Washington University, 1968.